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Original Study

Staff Turnover Intention at Long-Term Care Facilities: Implications of Resident Aggression, Burnout, and Fatigue

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A B S T R A C T

Objectives: Staff shortages and the high turnover rate of nursing assistants pose great challenges to long-term care. This study examined the effects of aggression from residents of long-term care facilities, burnout, and fatigue on staff turnover intention. The findings will help managers to devise effective measures to retain their staff.
Design: Cross-sectional descriptive study design.
Setting and Participants: A total of 800 nursing assistants were recruited from 70 long-term care facilities using convenience sampling.
Methods: The participants were individually interviewed and provided information about their turnover intention, resident aggression witnessed and experienced, self-efficacy, neuroticism, burnout, fatigue, and personal and facility characteristics.
Results: Hierarchical multiple regression analysis revealed that the size and organizational practices of long-term care facilities were not associated with staff turnover intention. Staff who spent less time in the industry reported witnessing resident-to-resident aggression, experienced resident-to-staff aggression, reported high levels of burnout, had acute or chronic fatigue, and had low levels of inter-shift recovery were more likely than others to report a high turnover intention.
Conclusions and Implications: Staff turnover poses great challenges to staff, residents, and organizations. This study identified important factors that may help support staff in long-term care facilities. Specific measures, such as person-centered care to diminish resident aggression by addressing residents' unmet needs, work-directed programs to mitigate burnout and improve staff mental health, and flexible schedules to prevent fatigue should also be advocated to prevent staff turnover.

The aging global population has brought about a greater need for long-term care. Staff shortages and high turnover rates, however, pose great challenges to long-term care facilities. Previous studies have reported annual staff turnover rates of 19% to 55%.[1-3] High turnover

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rates increase job stress, decrease quality of care,[4] and increase labor costs due to the additional training required for new staff and the loss of productivity.[5] A recent qualitative study reported that direct-care workers have been frustrated by being unable to provide sufficient care because of staffing shortages and high turnover rates.[6] To better understand the situation and to enhance staff retention rates, studies have examined the factors associated with staff turnover intention in long-term care facilities. The prominent factors identified in these studies include the nursing home work environment[7]; burnout[8]; fatigue[9]; neurotic personality, which is positively associated with job stress and burnout[10]; and self-efficacy, which is associated with work engagement.[11]

Most of the previous studies have focused on staff psychosocial factors, and there has been little research on the effect of the characteristics of long-term care facility residents on staff turnover intention. Given the close day-to-day interactions between staff and residents, it is likely that residents' characteristics and behaviors play significant roles in staff turnover intention. Among the various hostile and resistive resident behaviors, resident aggression may be particularly challenging to direct-care workers. Resident aggression may take the form of physical or psychological aggression,[12] and may range from shouting angrily to threatening, grabbing clothes, striking, and even sexual harassment.[13] Resident aggression rates of 7% to 94% have been reported in studies from Japan,[14] Turkey,[15] and Germany.[16] Verbal aggression is the most common type of aggression reported (60%–94%), followed by physical aggression (24%–70%) and sexual abuse (7%). Resident aggression negatively affects staff members' feelings of safety and confidence in the provision of care,[17] which in turn, compromises the quality of care and increases turnover intention.[18]

Resident aggression is a prominent risk factor for staff burnout.[14,19] One study in the Netherlands (N = 511) found that physical and psychological resident aggression were both positively associated with emotional exhaustion among staff, and only psychological aggression was positively associated with depersonalization.[20] Another study (N = 114), also in the Netherlands, showed that physical aggression by residents was positively associated with emotional exhaustion and depersonalization.[19] Furthermore, a study in Japan suggested that experiences of resident-to-staff aggression led to increased levels of emotional exhaustion and depersonalization.[14]

Unfortunately, many staff members consider resident aggression as unavoidable and they respond with acceptance and tolerance.[15] Zeller et al.[13] suggested that, because of the nature of health care duties, frontline health care workers frequently need to enter residents' personal space, which may be misinterpreted by residents and trigger their aggressive behavior. The situation may be worse for residents with dementia, because of their cognitive decline and functional limitations.[16]

The Hong Kong Context

Older adults in Hong Kong have a much higher institutionalization rate than their counterparts in other parts of the world. It is estimated that 1 in every 12 adults aged 65 or older in Hong Kong lives in a long-term care facility.[21] According to the Hong Kong Social Welfare Department,[22] residential care service entities for older persons aim to provide residential care and services for people aged 65 and older who cannot be adequately cared for in their homes (according to the Standardised Care Need Assessment Mechanism for Elderly Services). Such service entities include hostels and homes for older people, care and attention homes for older people, and residential care homes.

Similar to other places in the world, nursing assistants in long-term care facilities in Hong Kong are generally considered to hold an undesirable job. They receive a low salary of approximately US$1800 per month, but are responsible for a large number of caregiving tasks, such as cleaning, transferring, bathing, and feeding.

Study Objectives

To help diminish staff turnover and facilitate staff retention in long-term care services, in this study we aimed to investigate the possible stressors and factors associated with staff turnover intention in Hong Kong. The study was guided by the socioecological model of work stress,[23] which posits that organizational context, worker personal characteristics, work stressors, and coping responses affect staff morale and functioning. We investigated the role of organizational context, including the physical characteristics of long-term care facilities, the number of residents, the co-mingling of residents with and without dementia, and the proportion of residents with dementia; work stressors, including resident-to-resident and resident-to-staff aggression; and personal characteristics, including general self-efficacy, neuroticism, burnout, and fatigue, in shaping turnover intention among nursing assistants in long-term care facilities. We hypothesized that participants who work in larger facilities with a higher proportion of residents with dementia; who experience and witness more resident aggression; and who have a lower level of self-efficacy, a more neurotic personality, and higher levels of burnout and fatigue would report a greater intention to leave the organization than other participants.

Methods

A quantitative cross-sectional descriptive study was conducted. The study protocol was approved by the ethics committee of the first author's affiliated university.

Recruitment Procedures

The Social Welfare Department of Hong Kong reported that, as of December 2022, there were 20,052 places in long-term care facilities under direct full subsidy by the government; 10,988 places in long-term care facilities subsidized under the Enhanced Bought Place Scheme, in which the government pays an organization for the beds; 5335 non-subsidized places in not-for-profit self-financed homes; and 52,530 places in private homes.[24] According to the Quarterly Report of Employment and Vacancies Statistics,[25] there were approximately 22,200 workers in long-term care services for older individuals in 2022.

The target participants of this study were nursing assistants who provided care to older residents in long-term care facilities in 2022 and were able to speak Cantonese. Nursing assistants were excluded if they could not speak Cantonese, had worked in the industry for less than 6 months, or did not provide direct care to residents in long-term care facilities. A 2-stage sampling design was adopted. In the first stage, 95 residential homes were randomly sampled from a list of 948 residential homes, and in the second stage, all workers from the participating residential homes were invited to participate in the study. All surveys were conducted by experienced interviewers using individual face-to-face interviews.

The participants were fully informed of the study objectives and their right to withdraw from the study at any time, and they provided written consent to participate. They were individually interviewed in-person by trained research assistants. Each interview took approximately 30 minutes to complete. To compensate them for their time, each participant received HK$100 on completion of the interview.

Seventy residential homes agreed to participate in the study, representing a response rate of 73.7%. A total of 800 workers from these residential care settings completed the surveys, with a response

rate of 61.5%, calculated based on the total estimated number of 1300 workers.

Instruments

Turnover intention was assessed using the 6-Item Turnover Intention Scale (TIS-6).[26] The TIS-6 reliably measures turnover intention (Cronbach's alpha = 0.80) and predicts actual turnover over 4-month and 4-year periods.[27] The Chinese version of the TIS-6 has demonstrated satisfactory internal consistency (Cronbach's alpha = 0.70).[27] The participants in this study responded to the items on a 5-point scale, with higher scores indicating greater intention to leave the organization.

Resident aggression was measured using an adaptation of the Short-Form Resident-to-Resident Elder Mistreatment Scale (RREM),[28] which measures 12 behaviors, including verbal (eg, using bad words and screaming), physical (eg, hitting, grabbing, and shoving), and sexual (eg, saying sexual things and inappropriate touching) dimensions. The scale has demonstrated good reliability (Cronbach's alpha = 0.90).[28] For the present study, the scale was translated from the original English version to Chinese and back-translated into English to ensure its content equivalence. An expert panel consisting of a geriatrician, a social worker, a psychologist, and a nurse was consulted regarding the face validity of the translated instrument. Twenty nursing assistants in long-term care facilities piloted the instrument to ensure its comprehensibility. The participants indicated whether they had witnessed each of the behaviors directed by a resident toward another resident (resident-to-resident aggression) and whether they had experienced each of the behaviors by a resident toward a staff member (resident-to-staff aggression) in the previous month. The original RREM was designed to assess resident aggression on an individual resident level, but because of the relatively high resident–staff ratio in Hong Kong, staff in the present study reported their observations of residents in aggregate. A higher score indicated greater exposure to resident aggression.

Self-efficacy was measured using an adapted version of the 10-item Generalized Self-Efficacy Scale,[29] which assesses the strength of people's belief in their own abilities to deal with daily obstacles. The Chinese version has shown satisfactory internal consistency (Cronbach's alpha = 0.86),[30] and has been used in previous studies of caregiving for individuals with dementia.[31] The participants in this study responded to the items using a 4-point scale, with higher scores indicating higher levels of self-efficacy in caregiving.

Neuroticism was assessed using the neuroticism subscale of the NEO Five-Factor Inventory (NEO FFI).[32] A Chinese version of the NEO FFI is available,[33] and the neuroticism subscale has demonstrated satisfactory internal consistency (Cronbach's alpha = 0.77). The participants in this study responded to the items using a 5-point scale, with higher scores indicating higher levels of neuroticism.

Burnout was measured using the 22-item Maslach Burnout Inventory.[34] A high level of burnout is reflected by high levels of emotional exhaustion, depersonalization, and a sense of lack of personal achievement. A Chinese version of this scale is available, with Cronbach's alpha values for the subscales ranging from 0.71 to 0.86.[35] The participants responded to each item on a 7-point scale, with higher scores indicating a greater level of burnout.

Fatigue was assessed using the 15-Item Occupational Fatigue Exhaustion Recovery (OFER15) scale.[36] This scale measures work-related fatigue in 3 dimensions: chronic work-related fatigue traits (CF), acute end-of-shift states (AF), and effective fatigue recovery between shifts (IR). The Chinese version of the OFER15 scale has demonstrated satisfactory internal consistency (Cronbach's alpha = 0.83, 0.85, and 0.86 for CF, AF, and IR, respectively).[37] In the present study, the participants responded to each item on a 7-point scale, with a higher score indicating a higher level of fatigue.

Participants also provided their demographic information (age, sex, marital status, number of years working in the industry, and training received) and information about the size and organizational practices of their facilities (surface area, number of residents, and whether the facility separated residents with dementia from those without dementia).

Data Analysis

Descriptive statistics were used to illustrate the characteristics of the care homes and nursing assistants interviewed in this study. Given the insignificant intraclass correlation coefficient of the dependent variable, hierarchical multiple regression analysis was performed to determine the contributions of various factors to participants' turnover intention. The dependent variable was turnover intention. Block 1 included the size and organizational practices of the long-term care facilities, that is, the surface area, number of residents, co-mingling of residents with and without dementia, and proportion of residents with dementia. Block 2 included the participants' demographic characteristics, that is, age, sex, marital status, whether the participant had children, and the number of years working in the industry. Block 3 included resident-to-resident and resident-to-staff aggression. Block 4 included the participants' psychosocial variables, that is, general self-efficacy, neuroticism, burnout, and fatigue. All of the variance inflation factor values of the independent variables in the regression models were lower than the common cutoff threshold of 5.0, indicating that multicollinearity was not a concern.[38] In addition, the assumptions of linear regression models, including normality or residuals, homoscedasticity, and linearity were met, indicating that multiple linear regression was an appropriate method for the analysis.

Results

Participants

The average age of the 800 participants in this study was 42.19 years (SD = 9.74). Most of the participants were female (92%), most were married (76.4%), and most had children (78%). They had worked in the industry for an average of 7.09 years (SD = 4.62), and most were required to take care of residents with dementia (97.5%). Almost all of the participants (92.5%) had received training in dementia care, but only 59.1% considered that training to be sufficient.

The facilities in which the participants worked varied in size and capacity, with an average surface area of 1963.00 m^2 (SD = 2038.88), housing an average of 151.28 residents (SD = 91.88). Only 13.4% of the facilities separated residents with and without dementia. Table 1 presents the characteristics of the facilities and the participants in

Table 1
Facility Characteristics and Participants' Demographic Data

	Mean/SD; n (%)
Facility characteristics (N = 70)	
Surface area of the facility in square meters	2218.03/2291.07
Number of residents in the facility	132/91
Number of facilities that separate residents with and without dementia	20 (28.6)
Participant characteristics (N = 800)	
Female sex	736 (92)
Age	42.19 (9.74)
Married	611 (76.4)
Have children	624 (78.0)
Number of years working in the industry	7.09/4.62
Take care of residents with dementia	780 (97.5)
Received training in dementia care	740 (92.5)
Considered training in dementia care sufficient	473 (59.1)

Table 2
Correlations Between Variables (N = 800)

Variable	Turnover Intention Scale	Surface Area (Square Meters)	Number of Residents	Percentage of Residents With Dementia	Age	Number of Years Working	Generalized Self-Efficacy	NEO FFI Neuroticism	OFER15 Acute Fatigue	OFER15 Chronic Fatigue	OFER15 Inter-shift Recovery
Turnover Intention Scale	1										
Surface area (square meters)	.042	1									
Number of residents	.033	.538*	1								
Percentage of residents with dementia	.006	.077†	.255*	1							
Age	−.083†	−.216*	−.020	.018	1						
Number of years working	−.097‡	−.091†	.027	.011	.563*	1					
Generalized self-efficacy	.035	.103‡	−.013	−.026	−.160*	−.043	1				
NEO FFI neuroticism	.138*	−.110‡	−.044	.116‡	.160*	.180*	−.151*	1			
OFER15 acute fatigue	.269*	−.096‡	−.013	.089†	.104‡	.086†	−.031	.505*	1		
OFER15 chronic fatigue	.171*	−.071†	−.084†	.037	.066	.059	−.054	.338*	.244*	1	
OFER15 inter-shift recovery	−.279*	.004	.027	−.070†	−.076†	−.021	.033	−.314*	−.364*	−.248*	1

*Significant correlation at the .001 level (2-tailed).
†Significant correlation at the .05 level (2-tailed).
‡Significant correlation at the .01 level (2-tailed).

Table 3
Hierarchical Regression Analysis of Turnover Intention (N = 800)

Variable	Beta	*P* Value	Beta	*P* Value	Beta	*P* Value	Beta	*P* Value
Block 1: Facility Characteristics								
Surface area (square meters)	.04 (−.04, .12)	.341	.03 (−.06, .11)	.550	.01 (−.07, .09)	.840	.01 (−.06, .09)	.738
Number of residents	.01 (−.08, .09)	.834	.02 (−.07, .1)	.683	.05 (−.04, .13)	.282	.06 (−.01, .14)	.106
Separation of residents with/without dementia (1, yes; 2, no)	.05 (−.02, .12)	.178	.05 (−.02, .12)	.182	.04 (−.03, .11)	.308	.06 (−.01, .13)	.073
Percentage of residents with dementia	−.01 (−.09, .06)	.712	−.01 (−.09, .06)	.715	−.01 (−.08, .06)	.751	−.06 (−.12, .01)	.110
Block 2: Demographics								
Age			−.05 (−.15, .05)	.294	−.06 (.16, .03)	.182	−.08 (−.17, .01)	.085
Sex (1, male; 2, female)			.05 (−.03, .012)	.210	.04 (−.03, .11)	.219	.03 (−.03, .1)	.322
Marital status (1, single/divorced/widowed; 2, married)			.07 (−.06, .21)	.268	.10 (.03, .22)	.127	.10 (−.01, .22)	.081
Have children (0, no; 1, yes)			−.05 (−.19, .08)	.431	−.02 (−.15, .12)	.822	−.05 (−.17, .07)	.429
Number of years working			−.07 (−.16, .01)	.095	−.10* (−.18,−.02)	.014	−.09* (−.17,−.01)	.022
Block 3: Resident Aggression								
Resident-to-resident aggression (0, no; 1, yes)					.25*** (.19, .32)	.000	.24*** (.17, .3)	<.001
Resident-to-staff aggression (0, no; 1, yes)					.12*** (.05, .19)	.001	.09** (.02, .15)	.008
Block 4: Psychosocial Variables								
Generalized self-efficacy							.05 (−.02, .11)	.161
NEO FFI neuroticism							−.05 (−.13, .03)	.194
MBI-HSS burnout (0, no; 1, yes)							.07* (.01, .14)	.030
OFER15 acute fatigue							.19*** (.12, .27)	<.001
OFER15 chronic fatigue							.09** (.03, .16)	.006
OFER15 inter-shift recovery							−.20*** (−.27,−.13)	<.001
R-square	.004		.018		.099		.224	
F change	F (4, 795) = .834		F (9, 190) = 1.605		F (11, 788) = 7.901		F (17, 782) = 13.275	
P value	.504		.109		<.001		<.001	

MBI-HSS, Maslach Burnout Inventory-Human Services Survey.
Significance levels: *$P < .05$, **$P < .01$, ***$P < .001$.

this study. Table 2 summarizes the correlations among major variables in this study.

The size and organizational practices of the long-term care facility were not associated with staff turnover intention. Staff who had spent less time in the industry reported a higher level of turnover intention than those who had spent a longer time in the industry (beta = −0.09, $P < .05$). Both resident-to-resident aggression and resident-to-staff aggression were prominent factors associated with a higher level of turnover intention (beta = 0.24 and 0.09, $P < .001$ and 0.01, respectively). Participants who reported burnout symptoms (beta = 0.06, $P < .05$) had high levels of acute fatigue and chronic fatigue and low levels of inter-shift recovery (beta = 0.19, 0.09, and −0.20; $P < .001$, .01, and 0.001, respectively) and reported higher turnover intention than those who did not report such symptoms. Table 3 summarizes the results of the hierarchical regression analysis.

Discussion

This study investigated the factors associated with turnover intention in a convenience sample of nursing assistants in long-term care facilities in Hong Kong. We hypothesized that participants who worked in larger facilities with a higher proportion of residents with dementia; who experienced and witnessed more resident aggression; and who had a lower level of self-efficacy, a more neurotic personality, and higher levels of burnout and fatigue would report a greater intention to leave the organization than other participants. Our findings partially support these hypotheses.

Our findings indicate the importance of interpersonal factors in determining turnover intention. This is not surprising given that the nature of the nursing assistant's job requires intensive contact with residents and coworkers. Consistent with the findings of previous studies,[13,17] resident aggression was found to be a prominent factor associated with turnover intention. Our study adds to the body of literature by including both direct (resident-to-staff aggression) and indirect (resident-to-resident aggression) victimization experiences and demonstrates that both types of experience increase staff turnover intention.

Although previous studies have reported a link between a poor work environment and staff turnover,[39] the present study revealed a different picture. Our results show that the size and organizational practices of long-term care facilities are irrelevant to nursing assistants' intention to leave their job, as variation in the physical size and capacity of the facilities did not affect staff turnover intention. A plausible reason for this finding may be the similarities between long-term care facilities in Hong Kong. The Social Welfare Department of Hong Kong imposes strict guidelines on the staff-to-resident ratio and the minimum space per resident. Despite the fact that the facilities in this study varied in size and the number of residents accommodated, they all strictly followed the rules and regulations laid out by the Social Welfare Department and, therefore, should have been largely similar.

Consistent with the findings of previous studies,[40,41] burnout was associated with turnover intention in this study. Nursing staff frequently endure time pressures, heavy workloads, confrontations, people in need of long-term care, physical stress, shift work, and staff shortages.[42] Providing care to people with dementia, in particular, can be challenging.[43] The residents' loss of ability to cope with day-to-day life makes the job of providing care physically and emotionally demanding.[44]

Fatigue was another factor closely associated with turnover intention in this study. Fatigue is common among nursing professionals due to the nature of their job, which involves a high level of physical labor and intense interactions with residents. Fatigue has previously been shown to be associated with staff turnover intention.[9,40]

Limitations

Several limitations of the present study warrant attention in the interpretation and generalization of the study's findings. First, this study examined turnover intention instead of actual turnover. Although the measurement tool we used for turnover intention has been shown to predict actual turnover over 4-month and 4-year periods,[26] we could not infer any causal relationship between the factors assessed in this study and actual turnover. Moreover, although this study focused on turnover intention, it is equally important to investigate nursing assistants' intention to stay at the organization. Previous studies have found systematic differences between entrants, stayers, and leavers in long-term care facilities.[45] Future studies should address this issue. Second, the cross-sectional nature of this study limited its ability to establish causal relationships. Third, selection bias may have masked the findings of this study, as staff members who had considered the job to be unbearable may have already left the industry and thus, were not represented in the present sample. A longitudinal study is needed to address these issues. Fourth, because of the focused scope of this study, some important elements of the job design, such as wages and compensation at work, relationships with supervisors and coworkers, perceptions of justice in job division, and the duration working in the current institution, were excluded. These variables should be included in future investigations. We also did not measure the age of the participants' children. Children's age implies the amount of attention they need from the participants and should be included in future studies. Finally, the fear of retaliation may have limited participants' disclosure of their intention to leave the organization. Although the interviews were arranged at locations outside of the long-term care facilities and the participants were fully briefed on the confidentiality of their responses, such concerns may still be an issue regarding the credibility of the data collected from the participants.

Conclusions and Implications

As the global population ages, the demand for long-term care will continue to increase.[46] According to the World Health Organization, the nursing staff shortage will increase from 7.2 million to 12.9 million within 40 years.[47] Understanding the factors associated with staff turnover intention is essential to achieve adequate and stable staffing. This study examined the factors associated with turnover intention among nursing assistants in long-term care facilities.

Although the size and organizational practices of the facility were found to have a minimal influence on turnover intention, various measures could be taken to lower staff turnover intention. Among the various factors analyzed, resident aggression was the most important factor associated with turnover intention. Thus, attempts to retain staff in the industry should address resident aggression, which is detrimental to the residents and adversely affects the staff. Measures should be taken to diminish resident aggression.

In many cases, resident aggression may represent unmet personal needs, and in such cases, a client-centered approach, with tailored care plans for individual residents, would be beneficial. Other researchers have identified addressing residents' unmet needs as a key element in intervention models for resident aggression.[48] Aggression may also be a result of pain or other physical issues.[49] Specific training to improve nursing assistants' understanding of resident aggression and disruptive behaviors, especially in the context of dementia care, would be beneficial. Interactive internet-based training has demonstrated success in improving knowledge of and self-efficacy and intention to intervene in resident aggression.[50] A supportive work environment is equally important. Previous studies have demonstrated the mitigating effects of supervisory support, work effectiveness, and work empowerment on the association between the responsive behavior of residents and job satisfaction.[51]

Furthermore, programs aimed at mitigating staff burnout and fatigue should be promoted. Various programs have shown success in mitigating burnout and promoting the mental health of staff in long-term care facilities.[52,53] Work-directed interventions aimed at changing the working environment, work tasks, or working methods can effectively decrease the workload and increase job control.[43] Person-directed interventions targeted at improving staff skills can effectively mitigate the effects of stressors by introducing effective coping skills.[54] In-service training that focuses on capacity building has been shown to improve the attitudes, knowledge, and competence of staff in dementia care facilities,[55] and has the potential to mitigate job stress. A combination of these measures may be a promising strategy for mitigating burnout and fatigue among nursing assistants. To promote organizational productivity and improve the quality of work life, flexible schedules should also be advocated.[56]

Disclosure

The authors declare no conflicts of interest.

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